

NICOLA T. HANNA
United States Attorney
PATRICK R. FITZGERALD
Assistant United States Attorney
Chief, National Security Division
JUDITH A. HEINZ (Cal. Bar No. 176264)
Assistant United States Attorney
Senior Litigation Counsel, National Security Division
JAMES C. HUGHES (Cal. Bar No. 263878)
Assistant United States Attorney
Tax Division
MELANIE SARTORIS (Cal. Bar No. 217560)
WILLIAM M. ROLLINS (Cal. Bar No. 287007)
Assistant United States Attorneys
Terrorism and Export Crimes Section
KHALDOUN SHOBAKI (Cal. Bar No. 232864)
Assistant United States Attorney
Cyber & Intellectual Property Crimes Section
1500 United States Courthouse
312 North Spring Street
Los Angeles, California 90012
Telephone: (213) 894-7280/5615/7407/0759
Facsimile: (213) 894-2927
E-mail: judith.heinz@usdoj.gov
james.hughes2@usdoj.gov
melanie.sartoris@usdoj.gov
william.rollins@usdoj.gov
khalidoun.shobaki@usdoj.gov

Attorneys for Plaintiff
UNITED STATES OF AMERICA

UNITED STATES DISTRICT COURT

FOR THE CENTRAL DISTRICT OF CALIFORNIA

UNITED STATES OF AMERICA,

Plaintiff,

v.

YI-CHI SHIH,
aka "Yichi Shih,"
aka "Yuqi Shi," et al,

Defendants.

No. CR 18-50(B)-JAK

GOVERNMENT'S SUPPLEMENTAL BRIEF
REGARDING EVIDENCE IN SUPPORT OF
PETER MATTIS'S EXPERT TESTIMONY
AND DEFENDANT'S EXPORT COMPLIANCE
TRAINING

MEMORANDUM OF POINTS AND AUTHORITIES

I. Introduction

Through defendant's opening statement and cross examination of government witnesses, defendant has argued that he was involved in purely academic research in China and that various EAR exceptions applied to his conduct. The Court has also indicated that it will instruct the jury that the government must prove beyond a reasonable doubt that defendant knew his conduct was unlawful and that defendant "knew that a license was required" for the export of the MMICs at issue.

Accordingly, to establish defendant's willfulness beyond a reasonable doubt - and to rebut defendant's theory and evidence (including his proffered excerpts of the EAR) that he was only engaged in (and paid for) academic research or civilian telecommunications projects - the Court should allow the government to introduce: (1) testimony about the identities of defendant's PRC customers and the commodities those customers sought to develop; (2) testimony about the identities of entities in the PRC that paid or employed defendant and his coconspirators; and (3) evidence to prove that, in fact, defendant knew of no research-based or civilian use exceptions for the export of military-grade MMICs to the PRC. On the contrary, the evidence shows that defendant knew that high-powered MMICs had multiple military applications, and that such MMICs had long been controlled for export to the PRC.

**II. Peter Mattis's Expert Testimony is Directly Linked to
Entities in Defendant's Emails and Bank Records**

The government seeks to elicit testimony from expert witness Peter Mattis about the following PRC-based entities:

- Qing'an International Trading Company ("QTC")
- The Number 607 Institute ("607")
- China Electronics Technology Group Corporation 29 Research Institute ("CETC"), aka China Southwest Electronic Equipment Research Institute ("SIWEI")
- Chengdu RML Technology Company ("RML")

Documents found in defendant's own emails, digital devices, and bank accounts directly link defendant to these entities and expressly mention these entities, the identities of which are relevant to establishing that defendant knew a license was required to export the U.S. Company B MMICs to the PRC (i.e. that no research-based exceptions applied for military-grade MMICs), and that defendant did not believe that the funds he received (or the commodities that he exported) during the conspiracy would be used solely for "research" purposes, as he has argued.

A. QTC

On June 14, 2010, QTC wired \$1,000,000 into a ChinaTrust Bank account controlled by defendant. (Ex. 1004.) On November 10, 2010, defendant and his coconspirator - Jieru Deng - discussed the \$1,000,000 transfer from QTC to defendant in emails. (Ex. 139.) On April 14, 2011, coconspirator Jieru Deng also attached a wire transfer receipt showing a transfer of \$395,500 to defendant and emailed Yaping Chen a copy of the receipt, who in turn forwarded the email to defendant. (Ex. 141A.) In the signature block of her email, Jieru Deng identified herself as affiliated with QTC and provided QTC's physical address and telephone number in China. (Id.)

Defendant himself acknowledged QTC's role in the conspiracy. In a business memorandum, defendant indicated that because of U.S. and

1 European "export license control" on semiconductor manufacturing, he
2 and his coconspirators would "register GasTone Technology Co., Ltd.
3 [the company where defendant served as president] as a private
4 enterprise at an early stage, with [QTC's] years' experience in
5 overseas procurement and venue cooperation . . . while postponing
6 state-owned assets injection until the key equipment is procured in
7 place; with these measures, we can reduce the risk of purchasing
8 precision equipment to the minimum." (Ex. 144A-14346.)¹

9 Contrary to defendant's "academic research" arguments, Mr.
10 Mattis is expected to opine that QTC is in fact controlled by the
11 PRC's People's Liberation Army ("PLA"), and that QTC regularly uses
12 front companies like those in this case to avoid international
13 scrutiny and export controls.² Another witness, Lilie Chen, (who
14 shipped packages at defendant's direction and who was present at
15 meetings attended by both defendant and Jieru Deng in China), is also
16 likely to testify that Jieru Deng's husband and father were both in
17 the Chinese military, and that her father was a high-ranking Chinese
18 military official.

19 **B. CETC**

20 Similarly, Mr. Mattis is expected to testify that China
21 Electronics Technology Group Corporation ("CETC") 29 Research
22

23 ¹ Furthermore, on June 1, 2011, QTC wired \$3.4 million into a
24 "Mystical Optimism" Account maintained by Judy Chen (see Ex 1102).
25 These funds were subsequently used by Judy Chen to make payments to
defendant of at least \$700,000 (see Exhibit 608A).

26 ² In its disclosure letters to the defense, the government
27 provided a lengthy list of publications authored by Mr. Mattis.
28 These publications are widely available, and - to the extent
defendant wishes to test Mr. Mattis's reliance on those materials -
defendant has been able to obtain those publications since the
government's initial expert disclosure letter in March of 2019.

1 Institute³ is a Chinese state-owned company focused on the
2 modernization of the PLA. For example, Mr. Mattis will opine that
3 the company integrates operations regarding electronic sensors and
4 the disruption of foreign sensors; MMIC applications about which
5 another government expert has already testified. Mr. Mattis will
6 further opine that SIWEI - a client for CETC 29 - has developed
7 technology to identify vehicles and jam or disrupt electronic
8 sensors.

9 Once again, these entities are explicitly mentioned in the
10 evidence obtained from defendant's own emails and documents in this
11 case. In December of 2009, for example, defendant was emailed a copy
12 of an "agenda" for a visit to China. According to the agenda,
13 defendant was scheduled to meet with "key" laboratory personnel for
14 the "29th Institute" on January 6 and 7, 2010 to discuss "SOC" (which
15 stands for system-on-chip commodities) and to plan modules with
16 various "SOC personnel." (Ex. 129A.) Moreover, according to a
17 document found in defendant's residence about the "historical facts"
18 of Gastone Company (where defendant served as president), "CETC"
19 partnered with defendant's company in 2010 and 2011 to help purchase
20 "processing equipment." (Ex. 787A.) Defendant wrote that CETC later
21 agreed to have "SIWI Electronic as the main responsible body to
22 continue the foundry project," but complained that the process was
23 taking an "excessively long time." (Id.-23146).

26 ³ CETC 29 is also known as China Southwest Electronic Equipment
27 Research Institute (SIWEI), aka 29 (SIWEI Co) Institute, aka Chengdu
28 SIWEI Electronics Company

1 **C. The 607**

2 There is also ample direct evidence linking defendant to the
3 607, a PRC state-owned enterprise involved in the development of
4 missile guidance systems.⁴ For example, defendant's digital devices
5 contained a written memorandum about a GaN chip projected "code-
6 named" "Z5"⁵ that states:

7 [B]ased on the characteristics of the airborne needs of the
8 607, the RML Company has launched its research on the wide
9 frequency band and high power GaN chip (code named Z5). Based
10 on the contents of the meeting on March 13, 2013 between China
11 Avionics Systems Co., Ltd and the RML Company, the GaN chip
project is launched. The project will be a cooperation between
Chengdu RML and 607 to jointly conduct research and develop the
Z5 chip.

12 Exs. 2106A. This exact same memorandum also highlights U.S. Company
13 B's MMICs as some of the highest-powered in the world. (Id.)

14 Mr. Mattis will explain that China Avionics Systems Co. Ltd.
15 ("AVIC") was an Avionics investment company based in Beijing, China.
16 Number 607 Institute, a state owned enterprise, was a subsidiary to
17 AVIC and developed missile guidance systems, air-to-air missiles and
18 other PLA Air Force ("PLAAF") weapons and armament. Mr. Mattis is
19 expected to opine that the 607 was led by one of the two main
20 contractors for the PLAAF.

21 **D. RML**

22 Defendant also repeatedly referenced RML throughout his emails
23 and memoranda. Indeed, defendant was even assigned an email account
24 with the domain name "RML," and Lilie Chen (the son of Chen Yaping)
25

26 ⁴ As explained further below, Dr. Nordquist, the government's
27 expert witness, has already testified that high-powered MMICs can be
used in applications such as electronic warfare and missile guidance.

28 ⁵ The government intends to introduce evidence that Z5 was a
code name for U.S. Company B's wafers.

1 is expected to testify that defendant worked closely with Chen Yaping
2 in China when Yaping held senior positions at RML. In addition, the
3 same memo discussing the history of Chengdu Gastone Technology
4 Company states that RML signed a stock subscription agreement with
5 Chengdu Gastone (Ex. 787A), and other exhibits indicate that RML
6 later became a shareholder in defendant's company (Ex. 2603A). The
7 agenda referenced above (Ex. 129A) is also plainly related to a
8 "welcome visit" to RML.

9 If permitted to testify, Mr. Mattis will be able to opine that
10 RML focuses on identifying, monitoring and recruiting individuals
11 abroad, and that RML fronts as a Chinese telecommunications company
12 that builds semiconductors and integrated circuits. Mr. Mattis will
13 explain that RML has been associated with the PLA Air Force equipment
14 department and PLA 5791 factory, aiding in military-civil fusion
15 programs.

16 **III. Evidence of Defendant's Awareness of the Military**

17 **Applications of MMICs and Related Export Restrictions**

18 Just as the identities of the PRC entities above are relevant to
19 establishing that defendant was not - as he has now claimed - engaged
20 in research and knew his business partners were not engaged in
21 research, so too is evidence and testimony about defendant's
22 knowledge of restrictions on the export of military-grade commodities
23 to the PRC crucial to establishing that defendant knew a license was
24 required to export the high-powered MMICs in this case. Indeed, as
25 the government's expert Dr. Nordquist has already explained, the
26 powerful MMICs that he tested in this case (some of which the
27 government will prove defendant caused to be exported to the PRC) had
28 far ranging applications that included electronic warfare and

1 military radar.

2 Thus, consistent with the Court's request that the government
3 tether evidence of defendant's export compliance training about
4 military restrictions to the specific evidence in this case, the
5 government offers the evidence below by way of example:

- 6 • On January 27, 2010, defendant's brother and coconspirator,
7 Ishiang Shih, emailed defendant a copy of the U.S.
8 Department of Commerce's "China Policy Rule." (Ex. 243.)
9 The first page of the document stated that the Bureau of
10 Industry and Security ("BIS") had broadened the scope of
11 items that could be denied for export if they made a direct
12 and significant contribution to the Chinese military.
13 (Id.) Specifically, it revised "the license application
14 review policy for items controlled for national security
15 reasons to provide a presumption of denial for license
16 applications to export, reexport or transfer items that
17 would make a direct and significant contribution to the
18 PRC's military capabilities." (Id.) Ishiang sent
19 defendant another document that same day with red boxes
20 highlighted around restrictions governing technology that
21 would enhance the PRC's military abilities. (Ex. 244.)
- 22 • On February 22, 2012, defendant emailed HB Zhao and Yaping
23 Chen about applications for GaN chips and semiconductors.
24 Defendant wrote that "our expert team recruited globally
25 can exactly evade the restrictions laid on the export of
26 the entire factory's manufacturing technology." (Ex.
27 144A.) The same document referenced chip applications that
28 included airborne anti-collision radar and satellite

communications, as well as aviation and aerospace communications. (Id.)

- On October 26, 2010, defendant sent an email attaching minutes from a meeting of "Chengdu Ganide," a company on which defendant served on the board of directors along with several of his coconspirators in this case. (Ex. 253A.) The meeting minutes state that "Ganide's" five-year specialty projects plan included "missile tip guidance," (id. at 969), and "missile borne guidance" (id. at 971).

During the conspiracy, defendant also authored or received numerous power points displaying photographs of military equipment, such as aircraft or missiles.

All of this evidence is crucial to establishing defendant's willfulness, as is any training that defendant received about the restrictions on the export of military commodities to the PRC and defendant's knowledge that high-powered MMICs were also valuable to the U.S. military. Defendant's training and experience is also highly probative of defendant's knowledge - and whether he knew a license would be required for the MMICs at issue in this case - at the time the evidence set forth above was exchanged among defendant and his coconspirators.

IV. Conclusion

In short, the purpose of defendant's work in the PRC - as well as defendant's knowledge of the military applications of MMICs and his training on U.S. export compliance laws regarding military-use items - are critical to establishing defendant's willfulness in this case, and to rebutting defendant's arguments and evidence that he was merely engaged in research in China.

1 In light of the Court's concerns regarding Rule 403 balancing,
2 the government suggests that the Court issue a cautionary instruction
3 to the jury before Mr. Mattis's testimony in which the jury is
4 instructed to consider such testimony solely for its bearing on
5 defendant's knowledge and willfulness, and for no other purpose.
6 Even though Mr. Mattis's testimony relates directly to the entities
7 referenced by defendant in his own emails and presentations, such an
8 instruction would ensure that the jury is not unduly influenced by
9 Mr. Mattis's mention of military terms.

10 Dated: May 21, 2019

Respectfully submitted,

11 NICOLA T. HANNA
United States Attorney

12 PATRICK R. FITZGERALD
13 Assistant United States Attorney
14 Chief, National Security Division

15 /s/ _____
JUDITH A. HEINZ
16 JAMES C. HUGHES
MELANIE SARTORIS
17 WILLIAM M. ROLLINS
KHALDOUN SHOBAKI
18 Assistant United States Attorneys